

THE LARVA OF *PHILONTHUS NUDUS* (SHARP),  
A SEASHORE SPECIES FROM WASHINGTON  
(COLEOPTERA: STAPHYLINIDAE)

Ian Moore

*Abstract.*—The larva of *Philonthus nudus* Sharp is described and illustrated from a single specimen taken in company with 22 adults on the seabeach of Washington State.

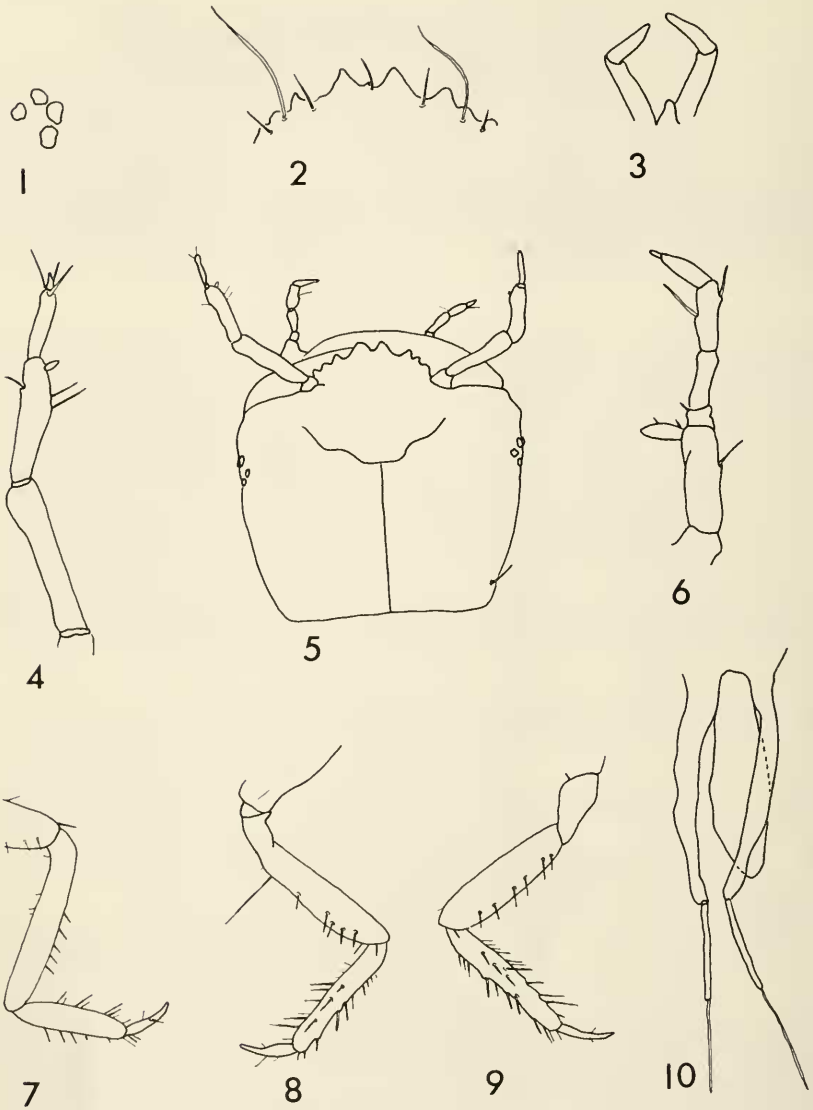
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*Philonthus nudus* (Sharp) is a species of rove beetle which was reported by Hatch (1957) as being very common on the seashore of British Columbia and Washington. It was first described from Japan (Sharp, 1874) in the genus *Cafius*. Fall (1916) described it from North America as a new species, *Cafius johnsoni*. Each of these authors placed it in *Cafius* apparently because of its seashore habitat. The fact that it is a large species and was not discovered in Pacific North America until 1916, but is now very common, indicates that it is probably a recent accidental introduction from Japan. Koch (1936) treated *johnsoni* as a subspecies of *nudus*. Moore (1965) pointed out that the species does not belong in *Cafius*, but in *Philonthus*, and that the character used by Koch to separate *johnsoni* and *nudus* is not valid in a long series of specimens.

The larvae of Staphylinidae are poorly known. The known larvae of North American species constitute only one-third of one percent of the North American fauna (Moore and Legner, 1974). Only six of the 145 described North American species of *Philonthus* (Moore and Legner, 1975a) have had anything recorded about their early stages; and the larvae of only another nine Holarctic *Philonthus* species have been described in the European literature (Moore and Legner, 1974).

The early stages of seashore Staphylinidae are better known than those of other members of the family. In their restricted seashore habitat, it is easier to associate larvae with adults. Special attention has been recently given to this habitat. The fact that the developmental stages of most of the Pacific Coast species of *Cafius* were treated by James, et al. (1971) and Moore and Legner (1975b) has made the association of the present larva with the adult of *Philonthus nudus*, in whose company it was taken, nearly certain.

In his key to the larvae of the Staphylinidae, Paulian (1941) separated the larvae of *Philonthus* and *Cafius* on the character of the urogomphus being shorter than the pseudopod in the former and as long as or longer than the pseudopod in the latter. It is obvious from his illustrations of members of each genus that Paulian was referring to the first segment of



Figs. 1-10. Larva of *Philonthus nudus*. 1, ocelli. 2, anterior margin of clypeus. 3, labium. 4, antenna. 5, head. 6, maxilla. 7, front leg. 8, middle leg. 9, hind leg. 10, pseudopod and urogomphi.

the urogomphus rather than to the entire organ. This character, as so modified, holds true for the larva of *P. nudus* as described here.

Larva of *Philonthus nudus* (Sharp)

*Color*.—Pale, ferruginous with the appendages testaceous.

*Form*.—Elongate, subparallel; head and appendages moderately chitinized, thorax and abdomen very weakly so.

*Head*.—Trapezoidal, about as wide as long, widest near apex; sides almost straight with posterior angles slightly rounded into neck, base straight. Neck about  $\frac{3}{4}$  as wide as head. Surface gently convex, shining with a moderate reticulate depression in the clypeal area. Ocelli 4, arranged in a compact group at the side of the head at about  $\frac{1}{4}$  the distance from base of mandible to base of head. Clypeal margin with 9 teeth, middle tooth minute, outer teeth small, other teeth progressively larger. Antennae 4-segmented; 1st segment short; 2nd about as wide as 1st, about  $5\times$  as long as wide; 3rd about as wide as 2nd and about  $\frac{2}{3}$  as long, with an obliquely placed "acorn seta" near apex which is about as long as width of segment; 4th segment about  $\frac{1}{2}$  as wide as 3rd and little more than  $\frac{1}{2}$  as long. Maxilla with stipes about  $3\times$  as long as wide; galea elongate oval, less than  $\frac{1}{2}$  as long as stipes; maxillary palpus 4-segmented, 1st segment not quite as long as wide, 2nd segment about  $3\times$  as long as wide, 3rd and 4th segments subequal in length and width to 2nd. Ligula about  $\frac{1}{3}$  the length of the 1st segment of the labial palpus. Labial palpus 2-segmented, 1st segment about  $3\times$  as long as wide, 2nd segment somewhat narrower and shorter than 1st, bluntly pointed. Gula with 3 widely separated parallel sutures.

*Thorax*.—Pronotum somewhat shriveled, apparently about as wide as long, widest at apex. Surface shining with a few setae at margins. Mesonotum and metanotum badly shriveled.

*Abdomen*.—Badly shriveled due to its membranous condition. Pseudopod 3 to  $4\times$  as long as wide, shorter than 1st segment of urogomphus. Urogomphus 2-segmented, each segment several times as long as wide; 1st segment a little longer than urogomphus; 2nd segment about as long as and about  $\frac{1}{2}$  as wide as 1st, bearing a stout seta at apex which is as long as segment.

*Length*.—12 mm.

*Material Examined*.—One specimen, Washington, Kitsap County, Bainbridge Island, 13 October 1974, on beach in company with 22 adults, Derham Giuliani, collector.

*Philonthus nudus* keys out to *P. distans* Horn in Horn's (1884) key to *Philonthus*. It differs from *P. distans* in that the legs are picuous and the head quadrate whereas in the latter, the legs are testaceous and the head

is oval. The length is 10 mm; that of *P. distans* 5 mm. *Philonthus nudus* differs from all of our Pacific Coast species of *Cafius* in having a series of four strong punctures on each side of the highly polished disc of the pronotum. In our species of *Cafius*, the disc of the pronotum is usually densely punctured and is always dull at least in part.

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Division of Biological Control, University of California, Riverside, California 92502.